REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and the following commentary.

I. Status of the Claims

Claims 1-139 were previously cancelled. Claims 141-143 are cancelled in this response, without prejudice or disclaimer. Claims 140, 144, 146 and 157 have been amended with support in the original claims.

Because no new matter is introduced, Applicants respectfully request entry of this amendment. Upon entry, claims 140 and 144-157 will be pending, with claims 147-156 withdrawn.

II. Objection to the Specification

The Examiner objected to the specification for deletion of CADECMs from the tables and for the formatting of the specification. A substitute specification is submitted herewith, deleting the sequences that are not presented in the tables. Therefore, the disclosure of the specification is consistent with that of the tables and the specification does not go beyond the scope of the corresponding PCT application. Accordingly, the stated basis for the objection should be obviated. Applicants respectfully request entry of the substitute specification.

III. Rejection of Claims under 35 USC § 112, second paragraph

Claims 140-146 and 157 are rejected under 35 USC § 112, second paragraph, for alleged indefiniteness. Claims 141-143 have been cancelled, thereby rendering the rejection of these claims moot. Applicants respectfully traverse the rejection of the remaining claims.

Specifically, the Examiner rejects claim 140 for the recitation of "biologically active fragment." Without acquiescing to the stated basis for the rejection, claim 140 has been amended to delete the phrase in question.

The Examiner further asserts that claim 144 is unclear how a complementary strand of the coding sequence of a nucleic acid can encode a polypeptide and that the usage of phrases such as "identical" and "specifically identifies SEQ ID NO: 53" are unclear. Claim 144 presently does not recite the phrases at issue, therefore, the basis for the rejection is obviated.

The Examiner rejects claim 157 for the recitation of "identity" and "specifically identifies SEQ ID NO: 53." The phrases in question have been deleted.

Moreover, the Examiner questions the dependency of claim 146. Claim 146 has been amended to depend from claim 145, in keeping with the Examiner's suggestion.

In view of the foregoing amendments and discussions, the rejections under section 112, second paragraph, should be withdrawn.

IV. Rejection of Claims under 35 USC § 101

Claims 140-146 and 157 are rejected for alleged lack of utility. Applicants respectfully traverse the ground of the rejection.

The Examiner acknowledges that the specification identifies SEQ ID NO: 11 as a polypeptide that is homologous to the human receptor for advanced glycation end products (RAGE). As evidenced by the concurrently filed Exhibit A, a pre-filing publication by He *et al.* (*Mol. Med.*, 7: 159-168, 2001) and Exhibit B, the abstract of a pre-filing review article by Vlassara (*Diabetes/Metabolism Research and Reviews*, 17: 436-443, 2001) that RAGE (also referred to as AGE-R) can be used in treating diabetes.

Moreover, the specification discloses that the polypeptide can be used in the treatment of "diabetes mellitus" (page 62, line 15) and how to generate antibodies, gene delivery system, *etc.* for therapeutic use.

Accordingly, the claimed invention is supported by an established utility, and therefore, the withdrawal of the rejection is warranted.

V. Rejection of Claims under 35 USC § 112, first paragraph

Claims 140-146 and 157 are rejected for alleged lack of written description in combination with alleged lack of utility. Applicants traverse the grounds of the rejection for the same reasons discussed above. Because the claimed invention possesses utility and the specification sets forth how to use the polypeptide for therapeutic use, the application satisfies the written description requirement.

Claims 144 and 157 are rejected for the recitation of "specifically identifies" SEQ ID NO: 53. Without acquiescing to the stated rational for the rejection, the phrase has been deleted from the claims.

The Examiner alleges that "in claim 157, no activity is associated with polynucleotides having at least 90% identity to SEQ ID NO: 53" (Action, page 7, lines 1-2). Applicants respectfully disagree.

As disclosed in the specification, at page 29, third paragraph:

> *Altered nucleic acid sequences encoding CADECM include those sequences with deletions, insertions, or substitutions of different nucleotides, resulting in a polypeptide the same as CADECM or a polypeptide with at least one functional characteristic of CADECM... The encoded protein may also be altered, and may contain deletions, insertions, or substitutions of amino acid residues which produce a silent change and result in a functionally equivalent CADECM.*

Therefore, one skilled in the art would have understood that a polynucleotide having at least 90% identity to SEQ ID NO: 53 encodes a protein that has the same activity as the one encoded by SEQ ID NO: 53.

In view of the foregoing, Applicants respectfully request withdrawal of the rejection under 35 USC § 112, first paragraph.

VI. Rejection of Claims under 35 USC § 102(b)

Claims 140, 142, 144-146 and 157 are rejected for alleged anticipation by U.S. Patent No. 5,864,018 to Morser *et al.* Applicants respectfully traverse the rejection.

Specifically, the Examiner contends that amino acids 1-274 of the instant SEQ ID NO: 11 are identical to amino acids 1-274 of Morser's SEQ ID NO: 2, and therefore, Morser teaches a polypeptide comprising a biologically active fragment or an immunogenic fragment of SEQ ID NO: 11.

The Examiner provides partial alignment of the sequences to show the identical amino acids. Applicants submit herewith Exhibit C, which depicts an alignment of the complete sequences of Morser's SEQ ID NO: 2 (top strand) and the instant SEQ ID NO: 11 (bottom strand). Morser's SEQ ID NO: 2 is 340 amino acids in length, while SEQ ID NO: 11 of the present application is 325 amino acids in length. As shown in the alignment as the highlighted region, the amino acids beyond position 274 are not identical or homologous to each other. Therefore, Morser does not teach an isolated polypeptide comprising the amino acid sequence of SEQ ID NO: 11 as recited in claim 140.

Moreover, the Examiner alleges that Morser teaches the polynucleotide prescribed by claim 157 (c). Without acquiescing to the basis for the rejection, claim 157 has been amended to delete clause (c).

Accordingly, Morser does not teach each and every aspect to anticipate the claimed invention. Applicants respectfully request withdrawal of the anticipation rejection.

CONCLUSION

The present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested. The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees, which may be required under 37 CFR §§ 1.16-1.17, and to credit any overpayment to Deposit Account No. 19-0741. Should no proper payment accompany this response, then the Commissioner is authorized to charge the unpaid amount to the same deposit account. If an extension is needed for timely acceptance of submitted papers, then Applicants hereby petition for such extension under 37 CFR §1.136 and authorize payment of the relevant fee(s) to the deposit account.

Respectfully submitted,

Date 11/9/07

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